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CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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SUBJECT Development of the Jaumann Bridge in the Work
25X1C fuer Formoldewesen HF for Soviet Use in
Ferrous Carbonyl Production

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1. Pertinent orders placed with the HF Plant in Berlin-Oberschoeneweide by Pomadov (fnu) and Trofayev (fnu) of the SCC Karls-
horst indicate that the U.S.S.R. has apparently started manufacturing ferrous carbonyl.

2. After the war, amplifying and filtering engineering in eastern Germany depended on imports of ferrous carbonyl from West Germany which were hampered, however, by western trade restrictions. Illegal imports were poor, the quality varied and poor examination, the material appeared to come from old-finished goods. It was apparently supplied without the knowledge of management. Efforts were made to manufacture iron dust in East Germany. In view of the importance of the quality of iron dust re-
quired for telecommunication engineering, Professor Kersten (fnu) of Jena University, ordered Graduate Engineer Candidate Hiller (fnu) to develop a Jaumann bridge. His results led the Soviets to order that these measuring instruments be developed further.

3. In January 1951, Engineer Karl Langer of the HF Plant received orders to develop the Jaumann bridge further, with special emphasis on the most pre-
cise practicable determination of the values of w, h and n (eddy current losses, hysteresis, and after-effect). Nine units were ordered, eight of which were to be for the Soviets. After completing these instruments, which together with all records were dispatched to Moscow on 28 December 1952, Langer was ordered in April 1952 to make the bridge automatic, to refine the process, and to equip the device with an optical and a graphic indicator. Langer was given 125,000 eastmarks. The Soviets sold the first instrument for 32,500 eastmarks and allotted an additional 110,000 eastmarks for its further development and an additional 125,000 eastmarks for development work. The latter allotment was not to be used prior to late May 1953, in order to avoid interruption of the work at the end of the fiscal year as a result of a lack of money.

Dr. Hildebrand (fnu) and Graduate Engineer Schulz (fnu) of the Treptow Telecommunications Engineering Plant simultaneously with Langer developed a Jaumann bridge which, however, differed from Langer's design. In September 1952, the first iron dust cores produced in East Germany by the Dralovid Plant, were subjected to comparison measurements on the Langer bridge in Oberschoeneweide, the Hildebrand-Schulz bridge in Leipzig, and the Stiller bridge in Jena. As they furnished identical results to a

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fraction of a percent, the decision was made that the Larger bridge be constructed. Ten units were to be made for German installations including the Leipzig Telecommunications Engineering Plant, the Gera Condenser Plant, the Dralowid Plant in Teltow, the Ferromagnetic Institute in Jena, the Electrochemical Combine in Bitterfeld, the Leuna Plant, the Central Laboratory for Telecommunications in Treptow, the Kabelwerk Oberspre, HF Plant in Oberschoeneweide, and the Electrical Engineering Main Administration. Five units were to be supplied to the Soviets. The delivery was to be made by May or June 1953. The Soviets promised that they would place additional orders.

5. When the Soviet ferrous-carbonyl production was discussed during the visit of the Czech experts on 3 November 1952, Wiesner (fnu), representative of the Postal Ministry of Czechoslovakia, without disclosing the source of his information, stated that the Soviets had a pressing plant in Stalin-grad. It remained undetermined, however, whether iron dust was manufactured in the U.S.S.R., although some people believed that ferrous-carbonyl was possibly produced in co-ordination with the nickel carbonyl installation which is based on the Mond process and is located in Petsamo. It was inferred, from the great demand for measuring bridges and the fact that no ferrous-carbonyl was shipped from East Germany to the USSR, that the USSR had no demand.
6. As the Leuna Plant produces 35 tons per month, East Germany is in a position to export. ² The first orders were placed by Czechoslovakia and Poland.

25X1A 1. ☐ Comment. A previous report contained information on the visit of Wiesner, who belongs to the Tatra Strasnice plant in Prague-Strasnice.

25X1A 2. ☐ Comment. A previous report stated that the first experimental quantities of ferrous-carbonyl dust would not be made prior to December 1952.

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